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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/587,810

12/04/2006

Phil Regan

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07/02/2009

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EXAMINER

BAINBRIDGE, ANDREW PHILIP

ART UNIT

PAPER NUMBER

3754

MAIL DATE

DELIVERY MODE

07/02/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,810	Applicant(s) REGAN ET AL.	
	Examiner ANDREW P. BAINBRIDGE	Art Unit 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/28/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/4/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because **they fail to effectively show the boundary between the second chamber 7 and the first chamber 16 and the path of the fluid communication between the second chamber 7, the valve 25 and the path past the first chamber 16 and onwards to the volume of space below the flexible piston 52 as described in the specification.** To be blunt, understanding the invention took far longer than normal for the Examiner because the drawings did not show how the fluid leaves the second chamber 7 and travels to the volume of space below the flexible piston 52 in a clear way. This path must be shown clearly with new additional drawings prior to an allowance being issued. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each

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drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 29 is objected to because of the following informalities: The use of formulas can be avoided in claim 29 by simply writing out that "the initial pressure of the second chamber is higher than the initial pressure of the first chamber by a predetermined excess pressure". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 26-52 are rejected under 35 U.S.C. 112, first paragraph**, because the specification, while being enabling for building a device that has a second chamber that fluidly communicates with the volume of space below the flexible piston 52, does not reasonably provide enablement for building a device that uses precisely the same fluid path as the invention because the drawings are inadequate to reliably assure what exactly the intended path is. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to build the invention

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with the exact same fluid path from the second chamber 7 to the region of space below the flexible piston 52 commensurate in scope with these claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 26-30, 34, 37 and 42-43 are rejected under 35 U.S.C. 102(b)** as being anticipated by WO 90/15377 (Van De Moortele).

7. Van De Moortele in figures 1-3 discloses a cylindrically shaped pressure control device 6-19 that is seated inside an aerosol spray can 1-5 with a dip tube (see figure 1) and a spray nozzle 4-5 (see figure 1) with an over-pressured chamber 6 that surrounds a substantially smaller pressure regulator chamber 14, 17 that has a valve 9, 11-13 in between the chambers that is opened and closed based upon the difference in pressure between the pressure regulator chamber 17 and its sealed membrane 19 and the overpressure chamber 6, a passageway forming in between 14 that allows fluid to travel from the overpressure chamber 6 through the passage chamber 14 and onwards to the container 2, the bottom of the overpressure chamber 6 having a centrally located bottom plug 7 for filler operations, the overpressurized chamber 6 fits into the aerosol container by an interference fit (see figure 1)

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. **Claims 31-32 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Van De Moortele as applied in claim 30 and further in view of US 2001/0002598 (Van't Hoff #1).

11. Van De Moortele as applied in claim 30 has all of the elements of claims 31-32 except for the upper end of the high-pressure container has a tapered neck portion, the closure forming a step-like funnel directed inwardly toward the neck portion. Van't Hoff #1 in figures 6a-6b teaches an overpressure reservoir 1 for an aerosol can 2, 40 with a pressure regulator 6, the upper end of the overpressure reservoir 1 has a tapered neck 34 (see figure 6A) that formed a step-like funnel directed toward the neck portion 6 that seats the pressure regulator 12. It would be obvious to one of ordinary skill in the art to adapt Van't Hoff #1 to the Van De Moortele device because the tapered neck formation

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is a reliable and well known way to seat the pressure regulator in relation to the overpressurized chamber in order to assure that no pressure escapes without the pressure regulator controlling it.

12. **Claims 35-36 and 38 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Van De Moortele as applied in claim 26 and 37 respectively.

13. Van De Moortele as applied in claim 26 and 37 respectively explicitly has all of the elements of claims 35-36 and 38 except for the high pressure container being made of plastic made by injection blow molding, preferably PET, the high –pressure container being laser-welded to the inner wall of the fluid dispensing container. These methods of manufacture and material selections are examples of routine design choice. It would be obvious to one of ordinary skill in the art to select blow molding PET hard plastic and then laser weld the over-pressurized container into place because these are materials and methods well known in the art, and provide well known and well understood results.

14. **Claims 39-41 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Van De Moortele as applied in claim 37 and further in view of US 2003/0075568 (Van't Hoff #2).

15. Van De Moortele as applied in claim 37 has all of the elements of claims 39-41 except for the aerosol container having a movable piston located above the over pressurized container and regulator that separated the aerosol container's dispensable materials from the pressurized fluid below, the piston being flexible and having annular sealing ribs, the piston moving upwards as the pressure pushes it tightly against the dispensable material above. Van'T Hoff #2 in figure 7A teaches a flexible piston

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plunger 53 with annular sealing rings 54 that rises as the pressure below pushes the plunger 53 tightly against the dispensable material 55 above as it is pressed by the overpressurized chamber 2 and pressure regulator 62 below. It would be obvious to one of ordinary skill in the art to adapt Van't Hoff #2 to the Van De Moortele device because Van't Hoff #2 teaches a reliable way to take advantage of the reliable pressure level below to push a movable plunger into the dispensing material in order to create a consistent dispensing pressure level.

Allowable Subject Matter

16. **Claims 44-52 would be allowable if** rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

17. **Claim 33 would be allowable if** rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

18. The following is a statement of reasons for the indication of allowable subject matter: The most interesting art found by far is from one inventor Roland Frans Cyrille Cornelius VanBlaere who authored the following references: 2006/0054237, 2006/0180615, 2007/0164039, which collectively stem from WO/2004/065260 and WO 2004/065217.

Van De Moortele and the two Van't Hoff references have many of the various structures claimed in the application as argued above, but simply do not provide enough detail or even present a need to manufacture the device as the detailed method of claim 44 provides. In addition, the use of ultrasonic welding the rim part of the high-pressure

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container in reference to an inner circular groove is not taught in the references as required in claim 33.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW P. BAINBRIDGE whose telephone number is (571)270-3767. The examiner can normally be reached on Monday to Thursday, 9:30 AM to 8:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. P. B./
Examiner, Art Unit 3754

/Kevin P. Shaver/
Supervisory Patent Examiner, Art
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